

Patent claims

1. Planetary transmission, in particular for machine tools, with a drive shaft that is connected to a sun gear, with an output shaft that is connected to a planetary carrier and that is mounted over the transmission housing with a first external bearing and a second internal bearing, whereby both of these bearings are separated from each other by a piston ring, with an axial bearing, with an interior gear which rotates over an interior gear bearing and is located in the transmission housing, with an axially displaceable sliding collar and with a lubrication circuit in the transmission, characterized in that the housing is provided with an oil intake (13) that is connected to an oil pump located outside the transmission, that supplies the oil flow over an oil line (16) to the first external bearing (5) of the output shaft (3), that has a piston ring (8) between the first external bearing (5) and the second internal bearing (6) that serves as an oil passage, in which the first external bearing (5) is connected through an oil feeding circuit with the axial bearing (9), and that the axial bearing (9) is connected with a cavity (17) in the interior gear bearing (11), whereby the cavity (17) is encapsulated through a wall section (18) of the transmission housing to an existing oil discharge (14).
2. Planetary transmission according to patent claim 1, characterized in that the oil feeding circuit between the first external bearing (5) and the axial bearing (9) consists of one, two or more oil lines (16', 16''), that run(s) parallel in a symmetric level through the longitudinal axle of the drive shaft (3), as well in that one of these oil lines is connected perpendicularly to each other over the longitudinal axle of the output shaft (3) and to the penetrating oil line (20).
3. Planetary transmission according to any of the preceding patent claims, characterized in that an oil intake (13) is provided in the bearings or in the transmission housing.

4. Planetary transmission according to any of the previous patent claims, characterized in that the oil intake is built into a centered borehole in the output shaft (3).
5. Planetary transmission according to any of the previous patent claims, characterized in that the discharge of the piston ring (8) implemented in the ring (8) that crosses parallel to the output shaft (3) axle, has no borehole (15) in the external or in the internal bushings.
6. Planetary transmission according to any of the previous patent claims, characterized in that the piston ring (8) discharge is a narrow gap between the piston ring (8) and the external bushing.
7. Planetary transmission according to any of the previous patent claims, characterized in that in case that there is an adapter plate (21) placed between the drive shaft and the planetary transmission, it must be provided with its own oil intake (23) and with its own oil line (22) so that it is connected to a discharge borehole (25) with the inside of the transmission.
8. Planetary transmission according to any of the previous patent claims, characterized in that in case that the oil intake can become the oil discharge, and that the oil discharge can become the oil intake.